

## IN THE CLAIMS

Please amend claims 1, 7-8, 15, and 18 as indicated below.

Please add new claims 22-23 as indicated below.

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1. (Currently Amended) A method, comprising:
- a. converting a television broadcasting signal into a digitized video signal;
  - b. separating luminance information and chrominance information of the digitized video signal in a dimension that has a constancy value below a predetermined threshold level, the constancy value representing an amount of variation among discrete samples of the digitized video signal within the dimension; and
  - c. optionally converting the separated luminance information and chrominance information into a first output format, wherein the first output format conforms to input requirements of a display apparatus.
2. (Original) The method according to claim 1, further comprising:  
calculating the constancy value in a horizontal dimension (hereinafter H constancy value), a vertical dimension (hereinafter V constancy value) and a temporal dimension (hereinafter T constancy value).
3. (Original) The method according to claim 2, further comprising:
- a. sampling the video signal at an integer multiple of a frequency of a chrominance sub-carrier to generate digitized samples; and
  - b. storing a number of the digitized samples in a storage medium.

4. (Original) The method according to claim 3, further comprising:

measuring an absolute value between two of the digitized samples on a same scan line that have same phases of the chrominance sub-carrier to establish the H constancy value.

5. (Original) The method according to claim 3, further comprising:

measuring an absolute value between a first digitized sample and a second digitized sample to establish the V constancy value, wherein the first digitized sample is in a particular position within a first scan line, the second digitized sample is in the same particular position within a second scan line, and the first scan line and the second scan line have same phases of the chrominance sub-carrier.

6. (Original) The method according to claim 3, further comprising:

measuring an absolute value between a first digitized sample and a second digitized sample to establish the T constancy value, wherein the first digitized sample is in a particular position within a first frame, the second digitized sample is in the same particular position within a second frame, and the first frame and the second frame have same phases of the chrominance sub-carrier.

7. (Currently Amended) The method according to claim ~~[[1]]~~ 4, further comprising:

selecting a horizontal filter to perform the separation if the H constancy value is less than the predetermined threshold level, the separation including adding or subtracting discrete samples of the digitized video signal on the same scan line that are 180° out-of-phase.

~~selecting an appropriate filter to perform the separating based on the constancy value.~~

8. (Currently Amended) A computer-readable medium including a plurality of instructions readable therefrom, the instructions, when executed by a computer system, cause the computer system to perform operations comprising:

- a. converting a television broadcasting signal into a digitized video signal;
- b. separating luminance information and chrominance information of the digitized video signal in a dimension that has a constancy value below a predetermined threshold level, the constancy value representing an amount of variation among discrete samples of the digitized video signal within the dimension; and
- c. optionally converting the separated luminance information and chrominance information into a first output format, wherein the first output format conforms to input requirements of a display apparatus.

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9. (Original) The machine readable medium according to claim 8, the instructions further comprising:

- a. sampling the video signal at an integer multiple of a frequency of a chrominance sub-carrier to generate digitized samples; and
- b. storing a number of the digitized samples in a storage medium of the computer system.

10. (Original) The machine readable medium according to claim 9, the instructions further comprising:

calculating the constancy value in a horizontal dimension (hereinafter H constancy value), a vertical dimension (hereinafter V constancy value) and a temporal dimension (hereinafter T constancy value) based on the digitized samples retrieved from the storage medium.

11. (Original) The machine readable medium according to claim 10, the instructions further comprising:

measuring an absolute value between two of the digitized samples on a same scan line that have same phases of the chrominance sub-carrier to establish the H constancy value.

12. (Original) The machine readable medium according to claim 10, the instructions further comprising:

measuring an absolute value between a first digitized sample and a second digitized sample to establish the V constancy value, wherein the first digitized sample is in a particular position within a first scan line, the second digitized sample is in the same particular position within a second scan line, and the first scan line and the second scan line have same phases of the chrominance sub-carrier.

13. (Original) The machine readable medium according to claim 10, the instructions further comprising:

measuring an absolute value between a first digitized sample and a second digitized sample to establish the T constancy value, wherein the first digitized sample is in a particular position within a first frame, the second digitized sample is in the same particular position within a second frame, and the first frame and the second frame have same phases of the chrominance sub-carrier.

14. (Original) The machine readable medium according to claim 8, the instructions further comprising:

selecting an appropriate filter to perform the separating based on the constancy value.

15. (Currently Amended) An apparatus, comprising:

- a. a bus;
- b. a processor coupled to the bus;
- c. a system controller coupled to the bus;
- d. a storage medium coupled to the system controller; and
- e. an improved video decoder, further comprising:
  - i. an analog-to-digital converter, coupled to the bus, to convert a television broadcasting signal into a digitized video signal and store digitized samples of the digitized video signal in the storage medium;
  - ii. a constancy detector, coupled to the analog-to-digital convert, to determine a constancy value in a horizontal (hereinafter H constancy value), vertical (hereinafter V constancy value) and temporal (hereinafter T constancy value) dimension, the constancy value representing an amount of variation among discrete samples of the digitized video signal within the respective dimension;
  - iii. a luminance/chrominance separation engine, coupled to the constancy detector, to separate luminance information and chrominance information of the digitized video signal; and
  - iv. a display encoder, coupled to the luminance/chrominance separation engine, to optionally convert the separated luminance information and chrominance information into a first output format, wherein the first output format conforms to input requirements of a display apparatus.

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16. (Original) The apparatus according to claim 15, the analog-to-digital converter further samples the video signal at an integer multiple of a frequency of a chrominance sub-carrier to generate the digitized samples.

17. (Original) The apparatus according to claim 16, the constancy detector further:

- a. calculates the constancy value based on the digitized samples retrieved from the storage medium; and
- b. generates a selection signal to represent the dimension wherein the constancy value is below a predetermined threshold value.

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18. (Currently Amended) The apparatus according to claim 15, the luminance/chrominance separation engine further comprises:

- a. a plurality of filters; and
- b. a selector, coupled to the filters, wherein the selector chooses the filter to perform the separation based on the a selection signal.

19. (Original) The apparatus according to claim 17, the constancy detector further measures an absolute value between two of the digitized samples on a same scan line that have same phases of the chrominance sub-carrier to establish the H constancy value.

20. (Original) The apparatus according to claim 17, the constancy detector further measures an absolute value between a first digitized sample and a second digitized sample to establish the V constancy value, wherein the first digitized sample is in a particular position within a first scan line, the second digitized sample is in the same particular position within a second scan

line, and the first scan line and the second scan line have same phases of the chrominance sub-carrier.

21. (Original) The apparatus according to claim 17, the constancy detector further measures an absolute value between a first digitized sample and a second digitized sample to establish the T constancy value, wherein the first digitized sample is in a particular position within a first frame, the second digitized sample is in the same particular position within a second frame, and the first frame and the second frame have same phases of the chrominance sub-carrier.

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22. (New) The method of claim 5, further comprising selecting a 2-D (two-dimensional) filter to perform the separation if the V constancy value is less than the predetermined threshold level, the separation including adding or subtracting discrete samples of the digitized video signal on the adjacent scan lines.

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23. (New) The method of claim 6, further comprising selecting a 3-D (three-dimensional) filter to perform the separation if the T constancy value is less than the predetermined threshold level, the separation including adding or subtracting discrete samples of the digitized video signal on different frames.